CLAIMS

[1] A light diffusing screen for a transmission projection screen, which is a light diffusing screen for a single light source-type rear projection television, adapted for use in combination with a Fresnel lens sheet,

said light diffusing screen comprising: a lens layer which can horizontally refract projected light; and a light diffusing layer provided on light outgoing side as compared with said lens layer, said light diffusing layer comprising a light transparent matrix and light diffusing fine particles formed of a light transparent material dispersed in the light transparent matrix,

said light diffusing layer having a multilayer structure of which the outermost layer on the light outgoing side of said light diffusing layer is a layer which diffuses light most strongly,

said outermost surface layer on the light outgoing side in said light diffusing screen having a surface roughness Ra of 0.2 μm $\leq$ Ra $\leq$ 1.0 μm.

[2] The light diffusing screen according to claim 1, wherein said light transparent matrix and said light diffusing fine particles constituting said light diffusing layer satisfy formula [I]

$$0 < |Np - Ns| \leq 0.05 \qquad [I]$$

wherein Np represents the refractive index of said light transparent matrix; and Ns represents the refractive index of said light transparent material constituting said light diffusing fine particles.

[3] The light diffusing screen according to claim 1, wherein said outmost layer on the light outgoing side in said light diffusing layer is the outermost surface layer on the light outgoing side of said light diffusing screen.

[4] The light diffusing screen according to claim 1, wherein said outmost layer on the light outgoing side of said light diffusing layer comprises protrusions of said light transparent diffusing fine particles in their at least a part projected from within said light transparent matrix.

[5] The light diffusing screen according to claim 1, wherein a hardcoat layer is further provided on the surface of the outermost

layer on the light outgoing side of said light diffusing layer and said hardcoat layer is the outermost surface layer on the light outgoing side of said light diffusing screen.

[6] The light diffusing screen according to claim 5, wherein said hardcoat layer contains therein an antistatic agent.

[7] A process for producing a light diffusing screen, characterized in that, in a heat shrink process involved in cool solidification and/or curing in forming the light diffusing layer in a light diffusing screen according to any one of claims 1 to 6 from a mixture of light transparent diffusing fine particles and a light transparent matrix different from each other in heat shrinkage, at least a part of said light transparent diffusing fine particles is projected from within said light transparent matrix.